Appendix A The Next Generation Network

Appendix B Economics of Internet Offload and Voice

Appendix C Next Generation Call Agents, Softswitches & Network Intelligence

Appendix D Business Challenge & Opportunities in Tomorrow's Mobile Networks

Appendix E Rural ILEC Capital Needs Assessment Questionnaire

- 1. What is your ownership structure?
 - a. How long have you been serving your communities?
 - b. Public or private?
 - c. Affiliations with other telephone companies or cooperatives?
 - d. Any special relationship to the community served?
- 2. What are your current revenues?
 - a. What have been your revenue trends over the last 5 years—growing/decreasing?
 - b. Why have your revenues gone up or down?
 - c. Have your operational costs gone up or down in the last 5 years.
 - d. Why?
- 3. How large is your customer base?
 - a. Access lines?
 - b. Geographic expanse of coverage area? What communities do you serve?Are they all "rural?"
 - c. Customers per square mile?
 - d. Is your customer base growing or declining- what has been the trend over the last 5 years?
- 4. Current infrastructure
 - a. How much served by remote switches
 - b. How many digital loop carriers
 - c. How many of your lines are digital?
 - d. How many lines are SS7 ready/provisioned?

- 5. At a high level, What is your services portfolio?
 - a. Basic Voice
 - b. LD
 - c. VAS—switch based and SS7 based?
 - d. ISDN
 - e. DSL
 - f. Mobile
 - g. ISP
- 6. What is your customer market mix served?
 - a. What percentage business
 - b. What percentage residential
- 7. What kind of business services/portfolio do you offer?
 - a. Is there demand for high speed access? For LAN/WAN interconnection services like frame relay, IP VPN?
- 8. What kind of demand or penetration of broadband access do you have?
 - a. Is it primarily driven by business or residential customers?
 - b. What is the current penetration of broadband residential vs. business?
- 9. Has the explosion of the internet changed how you do business or affected your network/operations?
- 10. What kind of activities do you have planned or are in progress for broadband initiatives? Plant upgrade? Marketing/promotional activities? Partnerships with ISPs?
 - a. Are you installing ADSL equipment? If so, what is the biggest issue?

- b. Are your subscriber fees covering your costs if you are providing ADSL services?
- c. Any next-gen broadband plans like voice over DSL or video services?
- d. How close is the nearest high speed internet node? Any plans for one coming closer?
- e. Is the distance of the node (or non existence) an issue for your broadband initiative?
- 11. What kind of effect has mobile had on your business? Increased traffic?

 Decreased access lines?
- 12. What is your biggest problem in serving rural communities? Cost to provide service? Decreasing customer base? Making profits?
- 13. What kind of plans do you have in the future for new services or infrastructure expansion/changes? Are they customer driven? Technologically driven?
 - a. Near term (1 year)
 - b. 2-4 years
 - c. 5 years +
- 14. What are your capital needs for these plans/changes? How do you plan -to fund the changes?
- 15. How do you currently obtain capital? USF? Private loans? Bonds?
- 16. What percentage of capital is from what source? What is the preferred source and why?
- 17. What do you look for in private loans/banks for capital needs?
 - a. Low interest rates?

- b. Ease to do business with
- c. ?????